



# UNITED STATES PATENT AND TRADEMARK OFFICE

m-L

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,955	02/28/2002	Koichiro Hori	AVS-1	3148

7590 09/19/2006  
Pandiscio & Pandiscio  
470 Totten Pond Road  
Waltham, MA 02451

EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT PAPER NUMBER

2622

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/085,955	<b>Applicant(s)</b> HORI ET AL.	
	<b>Examiner</b> LUONG T. NGUYEN	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 28-32 is/are allowed.
- 6) ☒ Claim(s) 10-16 and 18-27 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 6/26/2006 have been fully considered but they are not persuasive.

In re page 18, Applicants argue that Sass et al. are not concerned with the concept or recording images of a scene, but rather Sass et al. are concerned with imaging current high-speed repetitive events.

In response, regarding claim 10, Applicants amended claim 10 with limitation "capturing a sequence of video images of a scene." The examiner considers that claim 10 as amended still does not distinguish from Saas et al. in view of Bakhle et al. Saas et al. discloses the video camera, which has camera sensors 10, scan a target (a scene) and sends a continuous raw video signal to camera control box 14 (figure 1, column 2, lines 44-68). This indicates that the video camera captures a sequence of video images of a scene.

In re page 19, Applicants argue that Bakhle et al. do not capture a sequence of video images comprising first video images captured at a first exposure level and second video images captured at a second different exposure level.

In response, the Examiner considers that Bakhle et al. does disclose this feature. Bakhle et al. disclose a video camera, which captures a sequence of video images which comprises first video images captured at a first exposure level (video frame 1 corresponds to dark image 1, figure 6, column 6, lines 6-31) and second video images captured at a second different level (video frame M corresponds to dark image 2..., figure 6, column 6, lines 6-31). Note that dark

Art Unit: 2622

image represent for an image at an exposure level. Since claim 10 only requires different exposure level, the sequence of dark image 1, dark image 2, dark image 3, dark image X in figure 6 of Bakhle can read on this feature.

### ***Claim Objections***

2. Claims 1-5 are objected to because of the following informalities:

It is noted that Applicants confirmed that limitation “an optical image” on line 6 of claim 1 is correct. This means that limitation “an optical image” on line 6 is different from limitation “a viewed optical image” on lines 3-4 of claim 1. Therefore, claim 1 (line 5), claim 4 (line 5), “said optical image” should be changed to --said viewed optical image--.

Claims 2-3 are objected as being dependent on claim 1.

Claim 5 is objected as being dependent on claim 4.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-16, 18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sass et al. (US 5,404,162) in view of Bakhle (US 6,061,092).

Regarding claim 10, Sass et al. disclose method of capturing and recording video images comprising:

(a) capturing a sequence of video images of a scene wherein said sequence comprises at least first video images of said scene captured at a first exposure level and second video images of said scene captured at a second different exposure level (figure 1, column 2, lines 59-67);

(b) generating a series of video image signals comprising first video image signals representative of said first video images and second video image signals representative of said second video images (figure 1, column 2, lines 59-67);

(c) converting said first and second video image signals to first and second digital format data respectively (video images are converted to digital format by frame grabber 30 located in computer 32 (figure 1, column 4, lines 15-33);

(d) storing said first and second digital format data (storing digital data in memory 34, (figure 1, column 4, lines 15-33);

(e) retrieving said first and second digital format data (digital data stored in memory 34 is retrieved by processor 38, figure 1, column 4, lines 15-46);

(f) converting said first and second digital format data to first and second output video signals respectively (digital data is converted into analog signal for displaying onto monitor 40, figure 1, column 4, lines 33-47);

(g) utilizing said first and second output video signals to generate side-by-side displays of said first and second video images respectively (frames 46 and 47, figure 3, column 5, lines 24-66).

Sass et al. do not disclose said sequence comprises first video images captured at a first exposure level and second video images captured at a second different level, with said second video images being interspersed among said first video images in said sequence. However, Bakhle et al. disclose a video camera, which captures a sequence of video images which comprises first video images captured at a first exposure level (video frame 1, video frame M..., figure 6, column 6, lines 6-31) and second video images captured at a second different level (video frame 2, video frame M+2 ..., figure 6, column 6, lines 6-31). And note that dark image represent for an image at an exposure level. Since claim 10 only requires different exposure level, the sequence of dark image 1, dark image 2, dark image 3, dark image X in figure 6 of Bakhle can read on this limitation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Saas et al. by the teaching of Bakhle et al. in order to improve the quality of images captured by the digital camera.

Regarding claims 11, Sass et al. disclose wherein said first and second video image signals are analog video signals derived from an analog video camera (camera sensor 10, figure 1, column 2, lines 60-67).

Regarding claims 12, Sass et al. disclose wherein said first and second video image signals are digital video signals (video images are converted to digital format by frame grabber 30 located in computer 32 (figure 1, column 4, lines 15-33)).

Regarding claim 13, Sass et al. disclose wherein said digital video signals are derived from a digital video camera (camera sensor 10, figure 1, column 2, lines 60-67).

Regarding claims 14, 21, Saas et al. and Bakhle et al. do not disclose the step of assigning date, time and frame codes to separately identify each of said relatively bright and relatively dark images. However, Bakhle et al. disclose a frame includes header data 52, which includes various control information relating to frame and its place in the video stream (figure 3, column 5, lines 8-15). It would have been obvious to include date, time and frame codes into the video frames in order to let the user can retrieve a desired frame for viewing.

Regarding claims 15, Sass et al. disclose wherein said first and second digital format data is stored temporarily in first and second buffers (buffer memory 34, figure 1, column 4, lines 15-47).

Regarding claims 16, 19, Saas et al. and Bakhle et al. do not wherein said first and second digital format data is stored in a non-volatile memory device. However, Sass et al. disclose storing the digital data in memory 34 (figure 1). It would have been obvious to use a non-volatile storage to store digital data in order to prevent data from lost when power is shut off.

Regarding claims 18, Sass et al. disclose a method of capturing and recording video images comprising capturing in memory in the form of digital data a sequence of video images of a scene (figure 1, column 2, lines 59-67); converting said digital data to first and second

Art Unit: 2622

video signals (figure 1, digital data from processor 38 is converted to analog signal for displaying on monitor 40); using said first and second video signals to generate a side by side display of said first video images and second video images (frames 46 and 47, figure 3, column 5, lines 24-66).

Sass et al. do not disclose said sequence comprises first relatively bright video images of said scene and second relatively dark video images of said scene, with said bright and dark video images occurring alternately in said sequence. However, Bakhle et al. disclose a video camera, which captures a sequence of video images which comprises different dark images (video frame 1, video frame M..., figure 6, column 6, lines 6-31) and bright images (video frame 2, video frame M+2 ..., figure 6, column 6, lines 6-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Saas et al. by the teaching of Bakhle et al. in order to improve the quality of images captured by the digital camera.

Regarding claim 20, Saas et al. disclose wherein said step of storing precedes step (b) and further including the step of retrieving said digital data from said non-volatile storage, after which said retrieved data is processed according to steps (b) and (c), figure 1.

Regarding claim 22, see Examiner's comments regarding claim 10.

Regarding claim 23, see Examiner's comments regarding claim 18.

Regarding claim 24, see Examiner's comments regarding claim 10.



Art Unit: 2622

Regarding claim 25, see Examiner's comments regarding claim 18.

Regarding claims 26-27, see Examiner's comments regarding claims 18-20.

***Allowable Subject Matter***

5. Claims 1-9, 28-32 are allowed.

See Examiner's statement of reasons for the indication of allowable subject matter as indicated in Paper mailed on 3/23/2006.

6. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

See Examiner's statement of reasons for the indication of allowable subject matter as indicated in Paper mailed on 3/23/2006.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2622

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN LN  
9/17/06



DAVID OMETZ  
SUPERVISORY PATENT EXAMINER